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ENG 224 ALGORITHM ASSIGNMENT
Question 1; Design the application following the software development cycle

CONCEPTUALIZATION
Concept of the application; This application is all about providing statistical information about current happenings of COVID-19 and creating awareness for COVID-19, to help reduce the rate of transmission

SPECIFICATION
Basic features of the Application;
- This application will provide statistical information that is in form of Bar charts, pie charts e.t.c about current happenings of COVID-19 [that is, death toll, number of confirmed cases, number of people discharged, number of people infected e.t.c]

Added features;
- A feature for creating awareness for COVID-19, by listing preventive measures like Social distancing, use of sanitizers that contain about 70% of alcohol e.t.c.

- A simple diagnosis tool/feature for COVID-19 by asking questions based on COVID 19 symptoms.

- A feature that tells the number of COVID-19 ~~that tells the number of COVID-19~~ patients gotten from your Region / Local government Area [note; for Nigerians Only]

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Targeted platforms;
- All platforms; because web-based applications are applications that are accessed via the internet brows.

Programming language to be used;
HTML, CSS, Java Script

DESIGN

Question 2; Critically discuss the hardware and softwa... features

HARDWARES THAT THE APPLICATION WILL MAKE USE OF IN A DEVICE

- Touch screen / Touch Pad / Mouse
- GPS Reciever
- Radio / inbuilt antenna
- RAM [Read access memory] & Micro Processor

Touch screen / ~~Touch~~ Touchpad / mouse; Touch screen for phones, Touch pad for Personal computers, mouse for Desktop computers;
This hardware helps the enduser to navigate through the application, it enhances users interaction with the application

GPS Reciever; It is used to indicate the user's location

Radio / antenna; It enables the user to be able to connect to the internet.

RAM [Read access memory]; This is a short term memory that is used by the browser in accessing the web app
It provides quick access to files that the computer is actively reading or writing
It helps in loading applications, and using the browser.

MICRO PROCESSOR; It determines how fast a device is able to execute instructions i.e in the launching of the browser

SOFTWARE DESIGN PROCESS

- User Interface design [front-end Coding], that is creation of buttons, ListView for countries, Image views e.t.c.

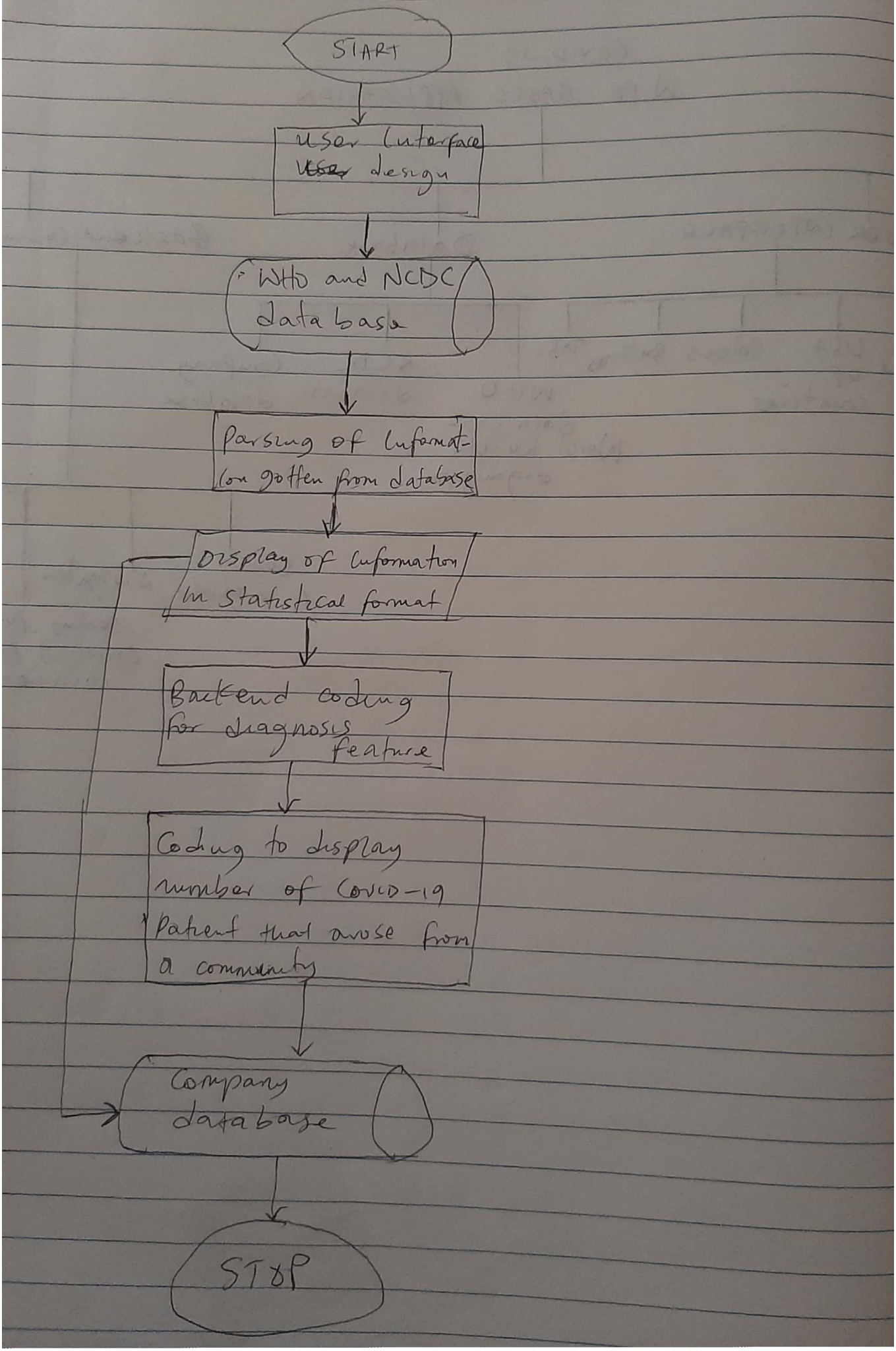
- ~~Creating~~ Making a HTTP connection to the World Health Organization [WHO] data base and The Nigeria Centre for Disease Control data base

- Parsing the information gotten from the databases into statistical information, and automatically showing the updates for your country [if location is turned on]
Diagnosis Feature
Back-end coding using conditional statements for diagnosis feature.

Location feature
Getting user location by prompting the user to turn on his/her location from their device and then using information gotten from NCDC database to get the number of COVID-19 patients that arose from his/her community.

- Finally creating a database & storing data in it.

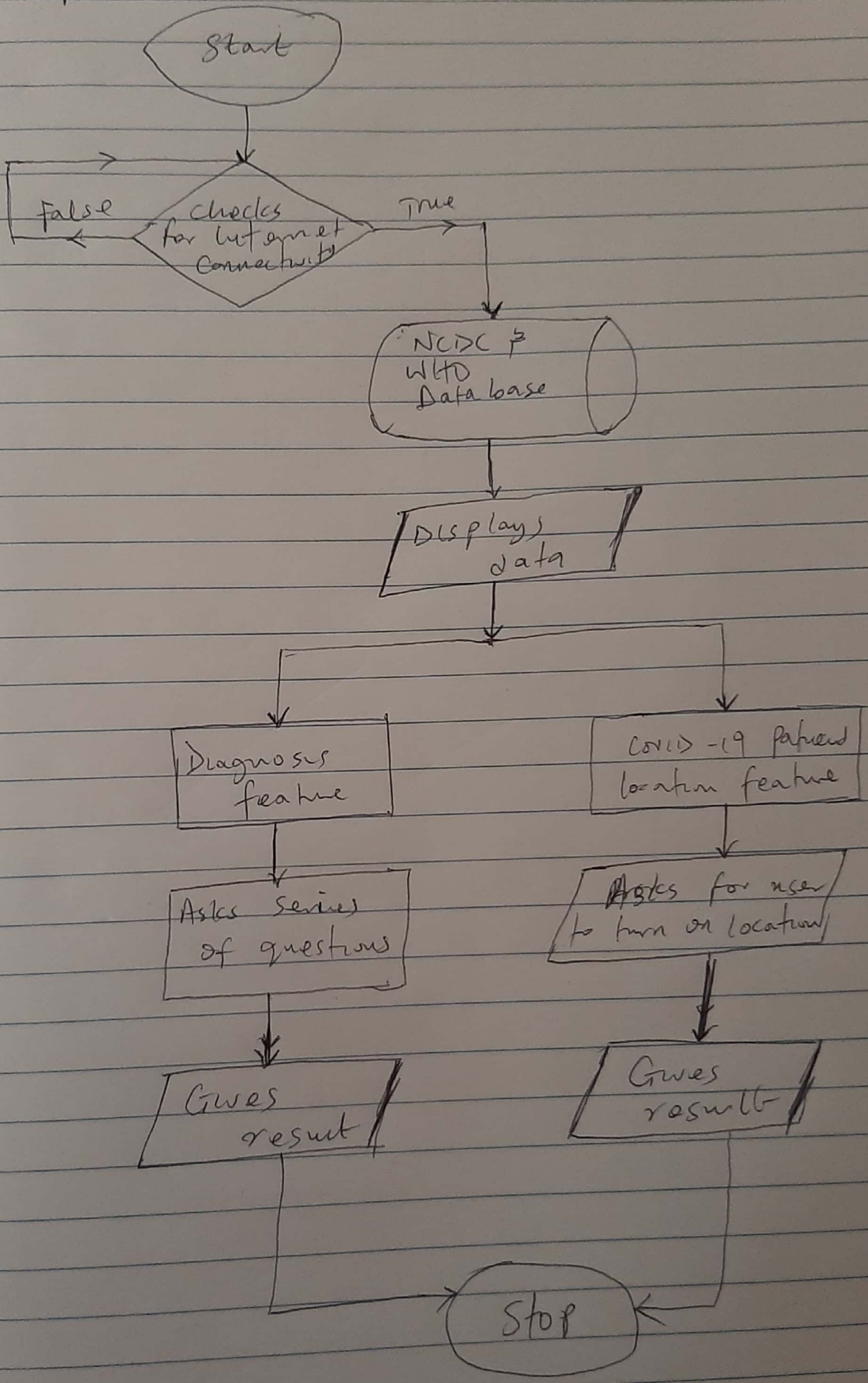
APPLICATION DEVELOPMENT FLOW CHART



USER EXPERIENCE ALGORITHM

step 1: start
step 2: checks for internet connectivity
step 3; If Internect connectivity is true {
Connect to database
parse data from data base
Displays data statistically
If user clicks of diagnosis feature
Asks user series of questions concerning his/her
health
Gives user result
If user clicks on infected People location
prompts user to on location
performs activity
}else;
continues checking for internet connectivity
step 4 ; stop

USER EXPERIENCE FLOWCHART



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MECHANICAL

IMPLEMENTATIONS; The application is implemented using High level language H-L-L which are HTML, CSS and JavaScript.
SQL for the database

TESTING AND DEBUGGING; The application ~~is~~ ~~good~~ shared to a test group for them to determine whether the application is running SMOOTHLY.
The application is also debuged to ~~find~~ fetch out bugs.

Release and Update; After being debuged and tested by a large group of people the application is released.

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(8) MECHANICAL ENGINEERING

TOP-DOWN DESIGN APPROACH OF THE APPLICATION